# Update for ESS Evidence Base

Environmental Sustainability Strategy
(2016-2020)

Version: July 2016

| Version Control table | |
|---|---|
| **Version number** | Update/ Review (version 2) |
| **Date current version produced** | Period for review April 15 – March 16<br><br>Date report published September 2016 |
| **Due date for next review** | April 2016 - March 2017 |
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# A. Introduction

The Environmental Sustainability Strategy (ESS) was adopted in 2015 and set out how the Council intends to progress towards a more sustainable way of working; as well as support the building of resilient communities. The following document provides the reader with updates to the ESS evidence base and adds new case studies which evidence the need for the work that the Council is doing.

# B. Focus Areas for updates in the ESS Evidence Base

1. Community energy and energy efficiency.
2. Transport and accessibility.
3. Resource management and waste.
4. Engaged communities.
5. Low carbon economy.
6. Development and the built environment.
7. Natural Resources.
8. Open Space.
9. Food and farming.
10. Water and flooding.
11. Climate Change.
12. New focus area for Health & Well-being.
13. Update on National Influences.
14. Update on the Councils key policies and strategies.

# Updates by Focus Area

# 1. Community energy and energy efficiency

**Household energy bills to 2020:** According to the Committee on Climate Change (CCC) it is likely that measures to support low-carbon technologies will increase annual energy bills (for the average "dual fuel" household) by around £100 by 2020.

There is scope to offset the bill increase through improvements in energy efficiency so energy bills will be reduced by around £35 on average through replacement of old, inefficient boilers. Further savings of £85 are available from more efficient lights and appliances and £25 from improved efficiency in heating systems (mainly improved insulation). Whether all of these savings are realised will depend on the extent to which they are backed by government legislation.

**Households with electric heating:** Around 7% of households use electricity for their heating. Since low-carbon policies can be expected to have more impact on electricity than gas prices, these households will face greater bill increases and therefore risk of fuel poverty. It will be important to bring forward measures to reduce these impacts. One opportunity will be through use of a share of Energy Company Obligation funding to benefit these households.

**Commercial and industrial energy bills to 2020:** Whilst energy costs will rise for commercial and industrial users due to low-carbon policies (by 20-25% from 2011 to 2020), the CCC predicts the final impact on the consumer to be very small, adding around 6 pence to every £10 spent on manufactured goods. Energy costs generally account for only a small component of total costs in these sectors. Therefore the economic impact of carbon policies, relative to the total production costs, will be marginal. There are opportunities to offset at least part of the increases in bills through energy efficiency measures. *Source: The Committee on Climate Change (CCC)*

**ECO and Warm Homes Update:** The Energy Company Obligation (ECO) is a programme to deliver energy efficiency measures in homes across Great Britain in order to reduce carbon emissions and improve the ability of low income and vulnerable consumers to heat their homes to comfortable levels. ECO was launched in January 2013 and is currently in its second obligation period, which is due to end on 31 March 2017. The Government's Spending Review 2015 announced plans for a supplier obligation to run for 5 years from April 2017 at an estimated level of £640 million per year.The consultation for the extension of ECO will be published in June 2016. The consultation can be viewed https://www.gov.uk/government/consultations/energy-company-obligation-eco-help-to-heat, responses are required by the 17th August 2016.

DECC have also issued the results of the consultation regarding the Warm Homes Discount. https://www.gov.uk/government/consultations/warm-home-discount-scheme-201617 .

ESS Evidence base update 2015/16

The National Audit Office (NAO) concluded in June 2016 that the Department of Energy and Climate Change's (DECC) Green Deal has not achieved value for money. The scheme, which cost taxpayers £240 million including grants to stimulate demand, has not generated additional energy savings. This is because DECC's design and implementation did not persuade householders that energy efficiency measures are worth paying for.

The NAO report Green Deal and Energy Company Obligation also found that DECC's design of its Energy Company Obligation (ECO) scheme to support the Green Deal added to energy suppliers' costs of meeting their obligations. This reduced the value for money of ECO, but the Department's information is not detailed enough to conclude by how much. Suppliers have met their obligations for saving carbon dioxide ($CO_2$) and reducing bills.

# 2. Transport and accessibility

*Table 1: Progress reported in the Strategic Plan in 2015 – Sustainable Transport*

| | |
|---|---|
| Articulate Colchester's transport needs to influence the development of new infrastructure by the Highway Authority and developers | As part of the evidence base for the new local plan, transport modelling work is being undertaken to gain a better understanding of infrastructure needs associated with new development. |
| Support the delivery of improvements to the strategic road and rail network | The third part of the Northern Approaches Road opened April 2015. Colchester's Park and Ride service opened in April 2015 and launched in June 2015. An extra stop at Middleborough was added to the route following lobbying. Colchester has been represented at an 'A12' workshop, providing information on current and future growth to Highways England. Officers have met with all 3 rail companies who have been invited to tender for the East Anglia Rail Franchise; and worked with Abellio Greater Anglia on the design for refurbishment of the north side station building for construction to start in 2015. |
| Allocate developer funding to sustainable transport projects in the borough which improve the balance between different modes of transport | Requests are made at Development Team and in response to applications to ensure new development is well served by sustainable transport modes. New path opened as part of Brook Street development linking to Wivenhoe Trail. Working with University and Maltings Student accommodation unit on Travel Planning "App". Funded final part of Tiptree Community Cycle project with CTC delivering events throughout the summer. |
| Improve the walking and cycling links between Colchester North Station and the town centre through initiatives such as 'Fixing the Link' | LEP Local Growth Fund to be invested on projects promoted by Colchester including improving the alleyways in the town centre and linking Park and Ride stops to the town centre core. Cycle parking on south side of Colchester station doubled and new secure parking unit launched in September – demand for cycling parking has doubled over the last 8 years on south side of station. Fixing the Link – design consultants appointed and consultation held. Detail design underway. Financial contributions secured from partners – AGA and ECC. |

# 3. Resource management and waste

## Organisational CO2e and carbon emissions

The population in Colchester is set to rise to 193,806 by 2020. This means that if the Council were to carry on with business as usual, without taking any mitigating action Colchester Borough Council could see a potential increase in carbon emissions of 11% by 2020 compared to current levels. With the work being implemented through the new Local Authority Carbon Management (LACM) Plan and the Environmental Sustainability Strategy, Colchester Borough Council is confident that it will achieve its target of 40% reduction (from 2008 baseline) by 2020.

# 4. Engaged communities

## Case study: Green Open Homes

Colchester Borough Council helped local environmental charity En-form to secure external funding from the National Network for Low Carbon Open Homes to enable volunteers to co-ordinate a month of open days at homes where energy efficiency measures had been installed. The project meant that Colchester residents could go and see for themselves how the technology worked and how effective it was.

18 home owners signed up to the programme of open days during the month of May 2014, and over 300 visitors took up the opportunity to visit and explore making energy efficiency changes to their own homes. The Council were able to help promote the scheme again in 2015/16, as well as offer advice and support in raising the funds to make the project a reality. http://colchester.greenopenhomes.net/

# 5. Low carbon economy

## Local Authority Carbon Management (LACM) Programme

The development of a new Local Authority Carbon Management (LACM) Plan is a key deliverable of the Environmental Sustainability Strategy 2015-2020, and will complement the strategy to ensure the Council does all it can to meet a 40% carbon reduction target by 2020. This will assist the Council to work as efficiently as possible across all its services, operations and buildings.

The last LACM Plan 2008-2012 exceeded its 25% carbon reduction target and work carried out during the development of the new LACM Plan identified that the Council had in fact achieved a 32.6% carbon reduction by 2012. The LACM Plan carried out 2008-2012 saved the Council 3,305 tonnes of $CO_2e$ and achieved almost £800,000 of financial savings over those four years. The projects identified and implemented during this time were considered 'quick win projects' where investment was relatively low in comparison to the forecasted financial and carbon savings.

The development of a new LACM Plan in 2015/16 has therefore been more challenging than the first, the opportunities presented this time were sometimes outside the scope of the LACM Plan, but these findings have not been wasted as they are now key deliverables within refreshed or new Council strategies such as Waste and Procurement.

Although the first LACM Plan successfully ended in 2012, the Council has continued to take carbon reduction into consideration when developing new projects. The carbon savings from this work have been captured in the annual greenhouse gas report which provides an overview of continued efforts to cut carbon emissions.

The new LACM Plan identifies seven priority projects, costing some £190,000 to implement and collectively saving £88,000 per year, giving a simple payback of under 3 years. To implement all of the projects defined in the plan will cost approx. £440,000, of which the above £190,000 for the priority projects has already been allocated. Implementing all of these projects could have the potential to save up to 46% versus the 2008 baseline. Delivery of the plan will be monitored by the LACM Project Team and reported annually to the Project Board (SMT) and the Portfolio Holder with a responsibility for Sustainability.

## Mitigation: reducing carbon emissions

The majority of the UK's emissions (85% in 2011) arise from our production and consumption of energy – whether that's driving cars, manufacturing goods or simply boiling a kettle.  Emissions can be lowered by becoming energy efficient and by switching to low-carbon fuels. Both will be necessary to meet UK carbon targets, along with action to tackle non-energy emissions.

**Energy Efficiency:** Being energy efficient doesn't mean going without a warm and well-lit home or making big sacrifices. Many energy efficiency measures are low cost and even save money.  Whether on a large-scale, or at the individual level, there are many opportunities to save energy through better insulation, more efficient boilers and appliances, using heating controls and lights more efficiently.

**Switching to low-carbon fuels:**  According to the CCC even the most efficient modern economy will need to contend with significant energy demand, so they believe it is essential to progress towards an energy system based on fuels with low, or no-carbon, content (de-carbonisation). This means moving away from using conventional coal and gas-fired power to electricity generated from nuclear power, renewable sources, and new technologies such as carbon capture and storage.

# 6. Development and the built environment

## Colchester Borough Homes Stock Improvement

Colchester Borough Homes have carried out the following works to our own housing stock:

- ➢ The first phase of the project installed around 600 PV installations to Council housing stock. The forecast was for 1,000 installations overall.
- ➢ By end of 2015 2,560 Council homes had been improved and were more energy efficient.

Mechanical ventilation with heat recovery, Low energy lighting, Solar panels, Tripled glazed windows and an Energy meter have been installed at Worsnop House as part of the refurbishment and the Council is installing smart electric meters for communal areas.

Part of the project saw Council homes 'Fuel switch' 30 properties from electric night storage to high efficiency gas central heating systems to provide affordable and controllable heating  20 properties switched to more sustainable sources of heating air source heat pumps

Much of the boiler replacement programme is driven by the age of the boiler, which comes from Colchester Borough Homes Asset Management Database.
The Council have replaced inefficient boilers with Air Source Heat Pumps (ASHP) to rural properties (focussing initially on properties not on gas mains) ASHP can be less efficient than oil boilers, so the focus is on making the right choice for residents and reducing fuel poverty, rather than purely on energy efficiency.

External wall insulation (EWI) has been installed at one property

Key deliverables on our own housing stock are carried forward by the Colchester Borough Homes Asset Management Team.

# 7. Natural resources

**Case study:** Colchester's Country Park volunteer activity this year:

- o Participation with over 50 Early Years and KS1 to KS4 local school & college educational groups.
- o Hosting, administering and co-organising 33 events and schemes with a range of community organisations, outdoor recreational groups, charities and Forest School users including Kardia Health, St Helena Hospice, Essex Stragglers, and Essex Wildlife Trust.
- o Led or enabled over 1000 volunteer project days with a range of voluntary organisations including Colchester Countryside Volunteer Rangers, Big Friendly Gardeners, and Trust for Conservation Volunteers, Essex University vTeam, Wivenhoe Wood Working Party, and Spinney Working Group.
- o Participation with the national Walking for Health scheme contributing over 100 volunteer led days and 1000 health walk participants.
- o Joint working with Colchester Natural History Society on Wildlife Trail App, Information panels and Wildlife cameras at High Woods Country Park. Due to be launched March 2016.
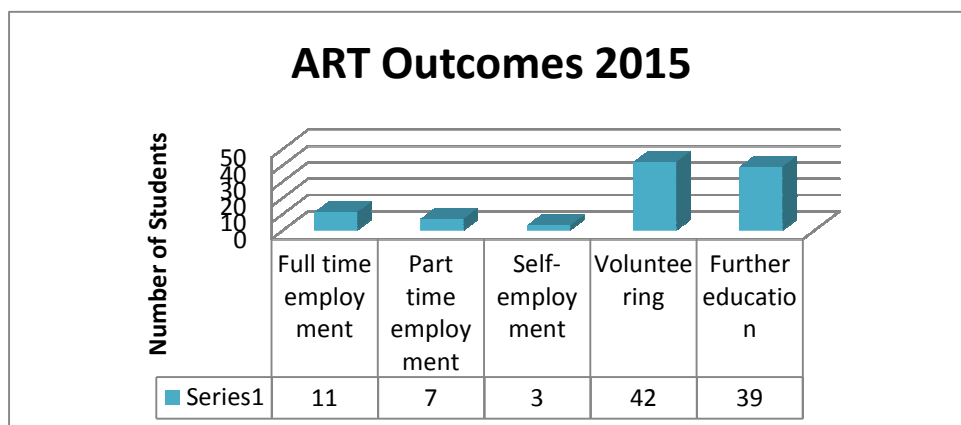- o 46 Gardening for Health sessions led for a range of health referrals and volunteers

## Example of Good Practice: Abberton Rural Training

In the last academic year Abberton Rural Training (ART) ran 2 courses relating to environment & sustainability:

I. Woodlands course (land management) included habitat creation, coppicing, hedge layering;

II. Horticulture course included sustainable gardening and food production, organic methods including composting and reuse.

ART has exceeded expectations in 2015/16 by meeting and exceeding targets laid out by their funders. The majority of students were previously NEET, and many had additional challenges such as disabilities and/or special needs. The majority of these students completed the course with more than one outcome i.e. *'moving to part time work and volunteering'*.

*Table 3: Outcomes ART 2015/16*

**ART Outcomes 2015**

| | Full time employment | Part time employment | Self-employment | Volunteering | Further education |
|---|---|---|---|---|---|
| Series1 | 11 | 7 | 3 | 42 | 39 |

In addition to the outcomes showing student transition, 86% of students reported an increase in confidence. Other ART courses in construction and carpentry saw good environmental practices (including use of recycled materials, and donated materials from building sites and builder's merchants that would otherwise go in skips and/or to landfill).

# 8. Open space

## Protecting wildlife and species in England

There is legislation to protect plants and animals from harm. Protected species are often those which are rarest or most vulnerable to human activity. Although this information is not new for 2015/16 the information has been added to this section of the evidence base to make it more comprehensive and informative.

**The 1979 Bern Convention:** Many of our animals and plants are protected under national law, which helps us meet the obligations of the Bern Convention.

**The Bonn Convention:** The UK is also signed up to the Bonn Convention, which aims to provide protection for endangered migratory species.

**Conservation of Habitats and Species Regulations 2010:** Some of the most highly protected animal and plant species in the UK are classified as 'European Protected Species'. These are identified by the EU Habitats Directive as the most seriously threatened in Europe, and include bats, great crested newts and otters.

In England and Wales the Conservation of Habitats and Species Regulations 2010 protect these species from different forms of harm. They also protect them from being disturbed and protect the places in which they live.

**The Wildlife and Countryside Act 1981:** The Wildlife and Countryside Act 1981 provide similar protection for other animal and plant species that are rare in Great Britain, including red squirrels and water voles. It also protects all wild birds in Great Britain, their eggs and active nests. Protection for all wild birds is required under the EU Wild Birds Directive.

**Laws to protect species from hunting or harvesting:** Some species are hunted or harvested, and need protection so that this is not done in an excessive or cruel way. These include game birds, badgers, seals and deer.

**Controlling pests:** The law requires that populations of certain species are controlled. Rabbits must be managed by occupiers of land, and rats and mice by local authorities. Occupiers may also be ordered to control other species and plants, for example injurious weeds.

# 9. Food and farming

## Bees and other pollinators

Bees (including solitary bees, bumble bees and honey bees) and other pollinators (such as hoverflies) provide an important service by pollinating crops and wild plants. They are also valued for supporting biodiversity and ecosystem health.

Pollinators also have an intrinsic cultural, aesthetic and social value that is appreciated by the public. However, pollinators face many threats. The National Pollinator Strategy sets out the work being done to help them thrive. The strategy is accompanied by a supporting document which explains our plans in more detail and the Status and Value of Pollinators which was produced by the Pollinators Expert Advisory Group.

**National Pollinator Strategy:**  Food security and environmental resilience are threatened by the decline of pollinator species, such as bees. In England, there are approximately 1,500 insect species that pollinate food crops and wild plants, including bees, hoverflies, wasps, flies, butterflies, beetles and moths. Many of these are declining from multiple pressures, such as the intensification of land-use and habitat loss. England's National Pollinator Strategy aims to address these and other pressures by providing advice on pollinator conservation, improving the evidence base for conservation and implementing a monitoring scheme. The draft Strategy has been assessed by the Environmental Audit Committee, which has suggested that to be effective, it needs further clarity in the approach to Integrated Pest Management, greater integration with the Common Agricultural Policy, and transparency of research into pesticide impacts.

# 10. Water and flooding

## Case study: Community Action to address coastal erosion accelerated due to effects of climate change.

Residents have come together to develop a climate change adaption recharge project. Members of the group include local fishermen, oystermen, sailing clubs, boatyard owners, individual landowners and the coast road association. The group have engaged local experts to help develop a proposal, working with the National Trust, Natural England, Essex Wildlife Trust and RSPB. This will ensure the work they are doing will protect species highlighted within the Biodiversity Action Plan (BAP) while building defences to stop the erosion of the local harbour area on Mersea Island.

The group have achieved charitable status 'The Mersea Harbour Protection Trust' so that they are eligible to apply for external funding, and have set a target to raise in excess of £467,000 between 2015 and 2018. By 2015 this target had been pledged and the charity was preparing to take the project into phase 2, to secure permissions and apply for implementation funds.

A strategic approach and plan has been developed so suitable materials that are already being dredged will be sprayed along specific coastal locations to protect areas which could otherwise be lost within 30 years. Dredged materials are waste and would otherwise be dumped out at sea. The mitigating action, led by the new community group, will impact on the security of local employment, international importance for conservation; local infrastructure and coastal housing.

The Business Case, Project Plan and Executive Summary is available on the web site http://savemerseaharbour.wordpress.com/

# 11. Climate Change
## Carbon Emissions

National Statistics covering 2014 estimates of carbon dioxide emissions at local authority level were published on Thursday 30th June 2016 on the DECC area of the GOV.UK website. The National Statistics release and the data can be found at the following link: https://www.gov.uk/government/collections/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics

Table 4: Per Capita 2008- 2014 Essex *(using latest statistical release from DECC June 2016)*
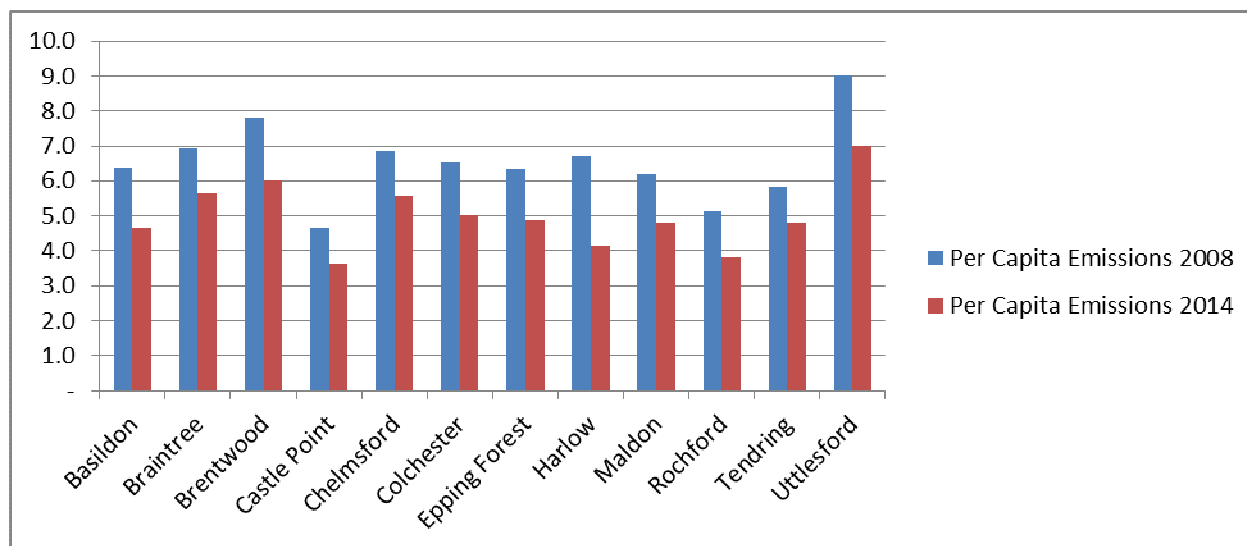


The per capita figure takes a borough wide look at emissions beyond the 3 scopes that the Council reports on for its own buildings, services and operations. The per capita collects data from use of industry and commercial electric; industry and commercial gas; industry and commercial fuels; agriculture; domestic electricity; domestic gas; domestic fuel; road transport including motorways, roads and minor roads; diesel railways; other transport and Land use, land-use change and forestry (LUULUCF) net emissions.

While CBC is a leading carbon cutting Council in the UK this look at per capita suggests that there is still work to be done to influence the wider commercial, agriculture, domestic and land use sectors. It is the role of the Council as a Leader to effect change, not just in leading by example but effecting change by calling residents to action by implementing an awareness raising campaign. It is also important that we look at how other areas such as Harlow who have achieved a significant reduction in commercial and domestic sectors.

# What's happening in the wider Colchester borough?
*Table 5: Per capita in Colchester 2005-2014*
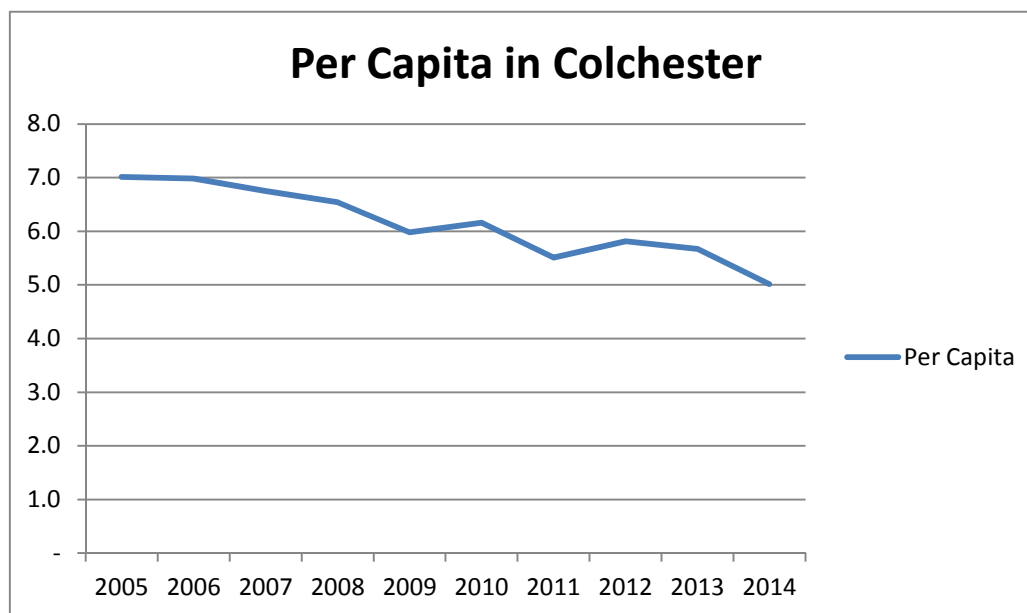


Councils have no control over wider domestic or commercial energy and fuel use, and minimal control over how many vehicles use our local roads and motorways. Colchester Borough Council looks at the per capita information published by Defra each year to see how the work we are doing influences the behaviour of others. Table 5 shows what is happening in Colchester and the tonnes of CO2 per resident. Defra publishes the information 2 years behind the current date so the 2014 figures are the most current for 2015/16.

In comparison to other boroughs Colchester isn't doing too badly 'per capita', although we could do better. It is therefore important to relay the wider message that to reduce the number of tonnes of CO2 being emitted into the environment around Colchester we all need to play our part in working and living more sustainably. Residents and organisations across the borough can effect changes if they operate in a greener and cleaner way. A collaborative approach is a proven and effective way to make changes and improvements to our environment.

# 12.    New focus on Health & Well-being

Health is becoming a key driver and closely connected to the work the Council is doing in connection to environmental sustainability.

## The Sustainability and Transformation Plan (STP) for North Essex and Suffolk

The NHS Shared Planning Guidance asked every local health and care system in England to come together to create their own ambitious local plan for accelerating the implementation of the Five Year Forward View (5YFV).

These blueprints, called Sustainability and Transformation Plans (STPs), will be place-based, multi-year plans built around the needs of local populations. STPs will help drive a genuine and sustainable transformation in health and care outcomes between 2016 and 2021.

They will also help build and strengthen local relationships, enabling a shared understanding of where we are now, our ambition for 2021 and the concrete steps needed to get us there.

To deliver these plans NHS providers, Clinical Commissioning Groups (CCGs), Local Authorities, and other health and care services have come together to form 44 STP 'footprints'. These are geographic areas in which people and organisations will work together to develop robust plans to transform the way that health and care is planned and delivered for their populations.

These footprints are of a scale which should enable transformative change and the implementation of the Five Year Forward View vision of better health and wellbeing, improved quality of care, and stronger NHS finance and efficiency.

In forming their footprints, local areas will have taken the following factors into account:
- Geography (including patient flow, travels links and how people use services);
- Scale (the ability to generate solutions which will deliver sustainable, transformed health and care which is clinically and financially sound);
- Fit with footprints of existing change programmes and relationships;
- The financial sustainability of organisations in an area; and
- Leadership capacity and capability to support change.

The boundaries used for STPs will not cover all planning eventualities. As with the current arrangements for planning and delivery, there are layers of plans which sit above and below STPs, with shared links and dependencies. It is also important to note that these boundaries may change over time as STPs are implemented, based on local circumstances.

## Five Year Forward View

The **NHS Five Year Forward View** was published on 23 October 2014 and sets out a new shared vision for the future of the NHS based around the new models of care. It has been developed by the partner organisations that deliver and oversee health and care services including Care Quality Commission, Public Health England and NHS Improvement (previously Monitor and National Trust Development Authority).

Patient groups, clinicians and independent experts have also provided their advice to create a collective view of how the health service needs to change over the next five years if it is to close the widening gaps in the health of the population, quality of care and the funding of services.

## Health Profile for Colchester

The most recent Health profile for Colchester was produced in June 2015. This provides an overview of Colchester's health in summary; details about life expectancy; child health; adult health and local priorities which include supporting vulnerable people, increasing levels of physical activity, and addressing homelessness.

## Climate Change Risk to Health & Wellbeing

The UK Climate Change Risk Assessment Evidence Report published on 12 July, 2016 by the Climate Change Committee's Adaptation Sub-Committee (ASC) lays out the most urgent risks and opportunities arising for the UK from climate change.

The report is the result of more than three years of work involving hundreds of leading scientists and experts from the public and private sectors and civil society. The risk assessment has been peer reviewed by UK and international specialists.

Changes to the UK climate are likely to include periods of too much or too little water, increasing average and extreme temperatures, and sea level rise.

The report concludes that the most urgent risks for the UK resulting from these changes are:

- Flooding and coastal change risks to communities, businesses and infrastructure.

- Risks to health, wellbeing and productivity from high temperatures

- Risk of shortages in the public water supply, and water for agriculture, energy generation and industry, with impacts on freshwater ecology.

- Risks to natural capital, including terrestrial, coastal, marine and freshwater ecosystems, soils and biodiversity.

- Risks to domestic and international food production and trade.

- Risks of new and emerging pests and diseases, and invasive non-native species, affecting people, plants and animals.

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**UK Climate Change Risk Assessment 2017 Evidence Report**

# People and the built environment | Chapter 5

**Committee on Climate Change**

**Increasing temperatures, rising sea-levels and modified rainfall will change the climate-related risks to people and the built environment. There are also potential opportunities for health and wellbeing from warmer weather.**

These risks interact across multiple levels – communities, buildings, health systems and individuals – as shown below.

### Climate change hazards affecting people and the built environment

| | Communities and settlements | Buildings | Health and social care system | Population health |
|---|---|---|---|---|
| **Heatwaves** | Heatwaves, urban heat island, air pollution | Overheating | Overheating risks to patients, social care, occupational risks, energy use | Heatwave risks to population, mortality, injury etc. |
| **Floods** | Flooded communities, resilience, relocation, blight/ economic effects | Flood damage, damp, mould | Flood risks to NHS assets, service disruption | Flood impact on mental health, deaths and injuries |
| **Drought** | Risk to water supply, drought | Subsidence | Service disruption | Water supply failure, risks to public health |
| **Cold** | Risks from extreme weather | Damp homes, cold homes | Service disruption | Cold risks to mortality and morbidity |

**Flooding already poses a severe threat to people, communities and buildings. Climate change is expected to increase the frequency, severity and extent of flooding.**

At present an estimated 1.8 million people live in areas at a 1:75 or greater annual risk of river, surface water or coastal flooding across the UK. This number by the 2050s is projected to rise to between 2.6 million (2°C scenario) and 3.3 million (4°C scenario), assuming low population growth and a continuation of current levels of adaptation. Significant and increasing investment will be required over time to address the projected increase in flood risk associated with climate change.

**Between 0.5 to 1 metres of sea level rise could make some 200km of coastal flood defences in England highly vulnerable to failure in storm conditions.**

Significant additional investment is likely to be required to maintain or to retreat defence lines to more sustainable locations. It is not known how much of the UK coastline is economically viable to protect in the future. Without further planning, affected communities are likely to be exposed to economic blight long before the physical risks manifest.

**Higher average and extreme temperatures are likely to have a range of impacts on the UK population.**

The number of heat-related deaths in the UK is projected to increase by around 250% by the 2050s (median estimate), due to climate change and the growing, ageing population, from a current baseline of around 2,000 heat-related deaths per year. There are no policies in place to reduce the risk of overheating in homes or other buildings.

There are some potential opportunities associated with higher temperatures. Outdoor activities may become more attractive, with perhaps an increase in active transport like cycling and walking. Very little quantitative evidence exists that considers these benefits.

**Climate change could reduce the number of cold-related deaths in the future, but this effect is likely to be small unless more is also done to adapt cold homes.**

As temperatures warm, the number of cold-related deaths is projected to decline by around 2% by the 2050s from a baseline of 35,000 – 50,000 per year. Climate change will reduce the risk, but the ageing population means there will be more vulnerable people at risk.

Further measures need to be taken in the next five years to tackle the large numbers of cold homes and reduce the impacts of cold weather on health.

**There may also be risks to health services from an increase in the frequency and intensity of extreme weather events, but little is known about the capacity of the sector to cope. Climate change may also increase the capacity of existing UK mosquito species to transmit certain diseases that are harmful to human health.**

## Urgency of additional action to support people and the built environment

| Risk/opportunity | Urgency score | Rationale for scoring |
|---|---|---|
| PB1: Risks to health and wellbeing from high temperatures | More action needed (research priority in Northern Ireland, Scotland & Wales) | The risk to health is likely to increase in the future as temperatures rise. There is some evidence that the risks of overheating in hospitals, care homes, schools and offices will increase in the future. There is more evidence for England than for the devolved amministrations. Policies do not exist at present to adapt homes or other buildings to higher temperatures. |
| PB2: Risks to passengers from high temperatures on public transport | Research priority (sustain current action in England, watching brief in Northern Ireland & Scotland) | The action underway in London to assess and manage risks of overheating on public transport should continue, together with similar action as needed elsewhere in the UK. |
| PB3: Opportunities for increased outdoor activities from higher temperatures | Watching brief | Leisure and other activities are likely to be taken up autonomously by people as the climate warms. |
| PB4: Potential benefits to health and well-being from reduced cold | More action needed | Climate change alone is projected to reduce the health risks from cold, but the number of cold-related deaths is projected to decline only slightly due to the effects of an ageing population increasing the number of vulnerable people at risk. Further measures need to be taken in the next five years to tackle large numbers of cold homes and reduce cold effects on health, even with climate warming. |
| PB5: Risks to people, communities and buildings from flooding | More action needed (research priority in Northern Ireland, Scotland & Wales) | Under the most optimistic flood defence investment scenario for England, the level of risk declines but remains high by mid-century, and future spending plans for the devolved administrations are unclear. Increases in flood risk cannot be avoided under a 4°C climate scenario even in the most ambitious adaptation pathway considered. |
| PB6: Risks to the viability of coastal communities from sea level rise | Research priority | Research is needed to better characterise the impacts from sea level rise on coastal communities, thresholds for viability, and what steps should be taken to engage and support affected communities. |
| PB7: Risks to building fabric from moisture, wind and driving rain | Research priority | More research is needed to better determine the future level of risk and what further steps might be appropriate. |
| PB8: Risks to culturally valued structures and the wider historic environment | Research priority | Climate-related hazards damage historic structures and sites now, but there is a lack of information on the scale of current and future risks, including for historic urban green spaces and gardens as well as structures. |
| PB9: Risks to health and social care delivery from extreme weather | More action needed (research priority in Northern Ireland, Scotland & Wales) | There is some evidence of inconsistent planning for extreme weather across the UK. Surveys indicate that many Clinical Commissioning Groups, NHS providers, GPs and Local Authorities may not have appropriate plans in place. |
| PB10: Risks to health from changes in air quality | Research priority | More research is needed to understand the influence of climate change on ground level ozone and other outdoor air pollutants (especially particulates), and how climate and other factors (e.g. individual behaviour) affect indoor air quality. |
| PB11: Risks to health from vector-borne pathogens | Research priority | Further research is needed to improve the monitoring and surveillance of vector species and related infectious disease, and to assess the extent to which current efforts are focussed on those infections that pose the greatest long-term risks. |
| PB12: Risk of food borne disease cases and outbreaks | Watching brief | Regulations in place to monitor and control food-related hazards should be kept under review. |
| PB13: Risks to health from poor water quality | Sustain current action | Current policies and mechanisms to assess and manage risks to water quality in the public water supply should continue to be implemented. |
| PB14: Risk of household water supply interruptions | Sustain current action | Policies are in place to safeguard the continuity of public water supplies during droughts and from burst pipes in cold weather. These risks should be kept under review to make sure long-term risks continue to be managed appropriately. |

**Note:** The urgency categories are defined as follows:
- ***More action needed:*** New, stronger or different government policies or implementation activities – over and above those already planned – are needed to reduce long-term vulnerability to climate change.
- ***Research priority:*** Research is needed to fill significant evidence gaps or reduce the uncertainty in the current level of understanding in order to assess the need for additional action.
- ***Sustain current action:*** Current or planned levels of activity are appropriate, but continued implementation of these policies or plans is needed to ensure that the risk continues to be managed in the future. This includes any existing plans to increase or change the current level of activity.
- ***Watching brief:*** The evidence in these areas should be kept under review, with long-term monitoring of risk levels and adaptation activity so that further action can be taken if necessary.

**www.theccc.org.uk/uk-climate-change-risk-assessment-2017**

# 13.    Update on Key National Influences

## COP 21

The **Paris Agreement** is an agreement within the framework of the United Nations Framework Convention on Climate Change (UNFCCC) dealing with greenhouse gases emissions mitigation, adaptation and finance starting in the year 2020.

An agreement on the language of the treaty was negotiated by representatives of 195 countries at the 21st Conference of the Parties of the UNFCCC in Paris and adopted by consensus on 12 December 2015.

It was opened for signature on 22 April 2016 (Earth Day), and 177 UNFCCC members signed the treaty, 15 of which ratified it.

## UK Carbon Budgets and Targets

The Climate Change Act established a target for the UK to reduce its emissions by at least 80% from 1990 levels by 2050. This target represents an appropriate UK contribution to global emission reductions consistent with limiting global temperature rise to as little as possible above 2°C

To ensure that regular progress is made towards this long-term target, the Act also established a system of five-yearly carbon budgets, to serve as stepping stones on the way.

The first four carbon budgets, leading to 2027, have been set in law. The UK is currently in the second carbon budget period (2013-17). Meeting the fourth carbon budget (2023-27) will require that emissions be reduced by 50% on 1990 levels in 2025.

*Table 2: UK's carbon budgets*

| Budget | Carbon budget level | % reduction below base year |
|---|---|---|
| 1st Carbon budget (2008-12) | 3,018 MtCO2e | 23% |
| 2nd Carbon budget (2013-17) | 2,782 MtCO2e | 29% |
| 3rd Carbon budget (2018-22) | 2,544 MtCO2e | 35% by 2020 |
| 4th Carbon budget (2023-27) | 1,950 MtCO2e | 50% by 2025 |

*Source: The Committee on Climate Change (CCC)*

The CCC published its advice to government on the fifth carbon budget in November 2015, covering the period 2028-2032, as required under Section 4 of the Climate Change Act. The government will propose draft legislation for the fifth budget in 2016.

**Rationale for carbon budgets**

By providing benchmarks towards the 2050 target, the carbon budgets ensure regular progress is being made and provide a level of predictability for UK firms and households to plan and invest for a low-carbon economy.

**Basis for levels of carbon budgets**

In providing its advice to Government on the level of carbon budgets the CCC uses criteria set out in the Climate Change Act. It has assessed, by sector, what can be achieved to reduce emissions at least cost, taking account of available technologies and government policy and recommended that:

- o energy efficiency improvements are a cost effective way to contribute to emission reductions whilst saving money for individuals and business;
- o fostering innovation in technology, although having some cost in the short term, will contribute substantially to emissions reductions and prove economical in future years

The budgets must also be consistent with UK obligations towards EU targets, and as a contribution to required global emission reductions.

# Nuclear power in the UK

The National Audit Office looks at some of the main electricity system challenges the UK faces in the next two decades, and the aims and responsibilities of the Department of Energy & Climate Change (DECC).

Available to download at www.nao.org.uk/report/nuclear-power-in-the-uk/ is the Full Report and Summary.

The report examines DECC's policies for encouraging investment in new generating capacity, including its specific measures for nuclear power stations, and the value for money risks that the Department needs to manage.

DECC wants nuclear power to form an important part of a 'balanced mix' of generating technologies over the long term, as it could provide reliable, low-carbon and cost-competitive electricity. DECC projects that between now and 2035, around 14 GW of new nuclear generating capacity may be built. The government wants to support a renaissance of the UK nuclear industry – the last new nuclear power station in the UK was completed in 1995.

# 14. Update on the Councils key policies and strategies

## The Strategic Plan 2015-18

This plan sets out the direction and future potential for our borough. As a Council we have an ambitious range of goals to achieve that build on the successes of the last three years, working with a large number of partners to get the best for our residents.

The Strategic Plan 2015-18 was approved by the Cabinet prior to being adopted by the full Council in February 2015. There is an action plan to go with this to set out our vision, specific actions and outcomes for each priority area. The action plan is presented to the Cabinet each year. This is a working document, and progress against these actions is reported on a six-monthly basis to the Cabinet and to the Scrutiny Panel starting in autumn 2015.

Strategic Plan Action Plan - half year performance March - Sept 2015 supported the delivery of the ESS by:

- **Working with the third sector** to deliver Colchester's Environmental Sustainability Strategy
- **Promoting Buy-Local** through the launch the new High Street Charter Market and development of the offer with themed or extra market events
- **Develop more efficient ways of working** by working with our residents, the third sector and other service providers to implement the Community Enabling Strategy to enable communities to influence, own or co-design services
- **Deliver energy efficient homes:** Work with Colchester Borough Homes to increase the quality of council housing by refurbishing these properties and using new technologies to ensure they are energy efficient
- **Make the most of our parks and open spaces** by managing them well and offering a range of activities and events
- **Improve street cleansing and enforcement in Colchester** with a focus on town centre, and in Stanway, Tiptree, West Mersea, and Wivenhoe
- **Work with health partners** to contribute towards delivering effective outcomes for individuals and their families, with particular focus on prevention and intervention to improve health outcomes and to tackle health inequalities
- **Work with Colchester Borough Homes**, housing providers, private landlords, residents and partners to create cleaner, greener and safer communities
- **Allocate developer funding to sustainable transport projects** in the borough which improve the balance between different modes of transport
- **Improve walking and cycling links** between Colchester North Station and the town centre through initiatives such as 'Fixing the Link'